



Hydrophones Series D-183

(Used in The RAYFLEX
Electro-Sonic Profiler)



Features:

The D-183 Series Crystal Hydrophones exhibit maximum sensitivity to pressure changes and minimum sensitivity to motion or acceleration. This unique characteristic assures top performance for towed as well as stationary applications. The basic case design permits operation in ambient pressures to 1000 psi. Units are available, on spe-

cial order, to withstand pressures to be encountered at extreme oceanic depths.

Signal Output:

Signal output is 75 microvolts/dyne/cm² (2.248 x 10⁻⁶ psi).

Frequency Response:

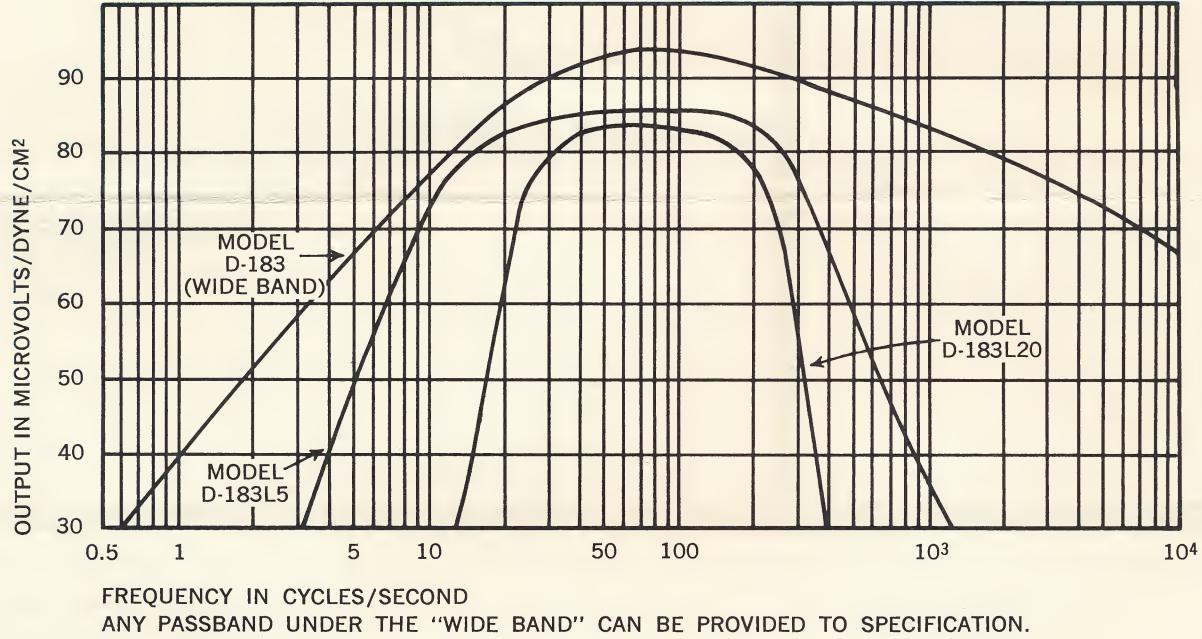
The natural Frequency Response, (0.5cps to 15 kc), makes it possible to specify your requirements for internal pass-band filters.

Preamplifiers:

All hydrophones have self-contained preamplifiers and rechargeable nickel cadmium batteries. They are a two-terminal device, with both terminals isolated from the case. Low level charging current is fed through the same two conductors from which the hydrophone output is taken (i.e., a single pair of conductors per hydrophone).

Specifications:

DIMENSIONS: 1.6 dia. x 9 inches long, 34 oz. (in air).
ENVIRONMENT: Temperatures -2° to $+30^{\circ}$ C. Pressure 1000 lbs.
POWER: Useful operating life single charge 6 days.
BATTERY LIFE: 1000 charging cycles.
NOISE BANDWIDTH PRODUCT: 0.1 microvolt @ 0.5-500 cps.
RESPONSE: 0.5 cps-15 kc to order.
OUTPUT: 75 microvolts/dyne/cm².
IMPEDANCE: 150 ohms.



**For Additional Information
Call or Write:**



600-E North Central Expressway
Richardson, Texas 214 AD 5-8301

A DIVISION OF
PHILLIPS-ECKARDT
ELECTRONIC CORPORATION

RAYFLEX EXPLORATION COMPANY
A Division of Phillips-Eckardt Electronic Corporation
P. O. Box 175
Dallas, Texas 75221

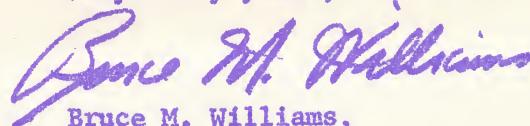
PRICE REDUCTION ANNOUNCED ON D-183 HYDROPHONE!

Rayflex is pleased to announce that due to manufacturing economies in the production of the D-183 Hydrophone that a new lower price is now being quoted.

In unit quantities, the D-183 is now available at \$165, F.O.B. Richardson, Texas, and is available from stock. This price still includes tailoring the internal filter to customer specifications within any band as shown on the data sheet.

We invite your immediate inquiry since delivery from stock is subject to prior sale.

Very truly yours,



Bruce M. Williams,
Marketing Manager

qje

For immediate service in your area, you may contact our representative:

Electronic Equipment Engineers
Mr. Bob Most
3351 Park Avenue
Oceanside, New York
914 - OW 9-9717 516 - RO 4-3745



**Miniature
Hydrophone**
Series 211



Features:

- Small Size — Provides a reduction in noise-producing turbulence in towed applications. This enhances the overall signal-to-noise ratio of monitoring or recording systems with which the hydrophone is used.
- Two-Terminal Device — Contains self-powered, transistorized preamplifier utilizing rechargeable nickel-cadmium batteries. By amplifying signals before they are fed back

to the ship, the effects of signal attenuation and noise pickup in the towing cable are minimized.

- Specially-Constructed Crystal Sensor Element — Assures maximum sensitivity to pressure changes and minimum response to motion or acceleration. Basic case design permits operation in ambient pressures in excess of 1,000 psi.

Signal Output:

Nominal 25 microvolts per microbar at middle of passband.

**Frequency
Response:**

From less than 0.5 cps to greater than 20 kc.

Preamplifier:

All Series 211 Miniature Hydrophones are equipped with self-contained, 70-db preamplifiers and rechargeable nickel-cadmium batteries. 36 hours of continuous operation is possible before recharging is required. Low-level charging current is fed through the same two conductors from which the hydrophone output signal is taken.

Specifications:

SIZE: 0.75 dia. x 6.25 inches long
WEIGHT: 6.5 oz. (in air)
DENSITY: 3.25
BATTERY OPERATING LIFE: 36 hours continuous before recharge required
FREQUENCY RESPONSE: From < 0.5 cps to > 20 kc
SIGNAL OUTPUT: 25 microvolts/microbar (nominal)
OUTPUT IMPEDANCE: 250 ohms

**For Additional Information
Call or Write:**



Data subject to change at any time
in order to improve design.

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600-Q North Central Expressway
Richardson, Texas 214 AD 5-8301
A DIVISION OF
PHILLIPS-ECKARDT
ELECTRONIC CORPORATION

RAYFLEX EXPLORATION COMPANY

(A DIVISION OF PHILLIPS-ECKARDT ELECTRONIC CORPORATION)
ADDRESS ALL CORRESPONDENCE TO: POST OFFICE BOX 175 • DALLAS 21, TEXAS

September 8, 1964

Mr. T. Nelson
Interlocking System Co.
Box 1546
Poughkeepsie, New York 12603

Dear Mr. Nelson:

Thank you for your inquiry through Electronics Products regarding the announcement of the Rayflex Miniature Hydrophone, Series 211. I have enclosed a preliminary data sheet for your information. We are in the process of obtaining supplemental data on the Miniature Hydrophone and will send this to you in the very near future.

Introductory pricing on the Series 211 Hydrophone is \$250.00 each. These devices are available for shipment within 30 days after receipt of your order.

Rayflex also manufactures complete Hydrophone arrays and accessories to meet specific customer requirements. We invite your questions and comments regarding your individual application and look forward to being of service to you in the future. We have added your name to our mailing list to receive additional information concerning this and other Rayflex products.

Sincerely,

David Prohaska
Assistant Marketing Manager

sms

Enclosure

For immediate service in your area, you may contact our representatives:

Electronic Equipment Engineers
3351 Park Avenue
Oceanside, New York
914 - OW 9-9717 516 - RO 4-3745